Achieving Excellence in Cash Flow Forecasting

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Agenda

• Citi Industry Research on Cash Flow Forecasting
• Baxter Experience & Lessons Learned
  – Short Term US Cash Forecasting
  – Long Term Quarterly Forecasting
  – Long Term Global Strategic Forecasting
Market Practices for Cash Flow Forecasting
Citi® Treasury Diagnostics (CTD)

- Proprietary benchmarking tool used by more than 350 clients of Citi
  - Benchmarks treasury practices in six areas, including cash flow forecasting, for insights into client’s current practices
  - Highlights strengths and weaknesses of treasury operations and risk management

- Following slides are a summary of CTD results for cash flow forecasting
Profile of CTD Benchmarks*

**Annual Revenue**
- < $5bn: 45%
- $5bn - $15bn: 26%
- > $15bn: 19%

**Industry**
- Industrials: 25%
- Consumer: 23%
- EPC: 19%
- TMT: 19%
- Healthcare: 8%
- Other: 7%

**Country Type**
- Developed: 73%
- Developing: 21%
- Advanced Developing: 6%

**% Revenue Outside Home Country**
- 0-24%: 32%
- 25-49%: 19%
- 50-74%: 17%
- 75-100%: 19%

*n = 373*

* Citi® Treasury Diagnostics, 2013.
**Treasury Function Profile**

### Scope of Treasury Responsibilities

- **Cash Operations**: 95%
- **Bank Relationship Management**: 95%
- **Cash Forecasting & Planning**: 89%
- **Short Term Borrowing**: 87%
- **Treasury Controls & Accounting**: 74%
- **Risk Management**: 72%

### Does Treasury Have KPI’s?

- **Yes**: 65%
- **No**: 28%

### Number of Staff

- ≤10: 49%
- 11-30: 31%
- >30: 20%

* Citi® Treasury Diagnostics, 2013.

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Cash Flow Forecasting Tools*

Cash Flow Forecasting Process

- Excel Spreadsheet complied from multiple sources: 60%
- Automated TWS/ERP Input + Manual: 31%
- Completely Automated: 2%

n=374

Companies that rely on Excel are more likely to be:
- Headquartered in a developing market (esp. LATAM & APAC)
- Local or regional footprint
- Use a decentralized treasury model (89%)
- Have not put in place an In-House-Bank
- Do not run shared service centers

* Citi® Treasury Diagnostics, 2013.
Constructing the Forecast*

Low rate of utilization for historical trends indicates an opportunity for many companies to improve forecast quality.

- **Manual Input**: 84%
- **Collections Forecast Based on Past**: 49%
- **Payables Forecast Based on Past**: 43%
- **Statistical Analysis of Past Patterns**: 38%
- **Automated Inputs from TWS/ERP**: 38%

* Citi Treasury Diagnostics, 2013.
Managing the Forecast Process*

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<th>Monthly</th>
<th>Quarterly</th>
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<th>Next Month</th>
<th>Next Quarter</th>
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*Citi Treasury Diagnostics, 2013.*
Evaluating Forecast Quality*

How Often Do You Need to Reverse Positioning?

- Daily: 9%
- Weekly: 13%
- Monthly: 14%
- Quarterly: 6%
- < Quarterly: 19%
- Never: 22%
- Don't Know: 17%

* Citi® Treasury Diagnostics, 2013.
Cash Forecasting at Baxter
Baxter Profile

• Global health care company with $14B in sales
• About 60% of sales generated offshore
• Complex legal structure, operating in more than 100 countries
• Cash forecast is critical in the US as a result of shareholder obligations
Baxter Background and History

2004

• Current management team was installed
• Cash forecasting not overly necessary
  – Legal structure allowed for cash flow into US
  – Dividend was small and paid annually
  – Share repurchases did not exist

2005

• By late 2005, legal structure changed
  – Cash flow into US was reduced
  – But, HIA offset the impact and allowed for repatriation
Cash Flow Forecasting at Baxter

2005

- Share repurchasing activity restarted
- Dividend increased & changed to quarterly payout
- US cash flows were lower
- Debt financing and commercial paper became treasury tools

2006 onward

True cash flow forecasts became essential for Treasury to perform optimally
Short Term Forecast

• History helps predict the future
• Highly detailed sources/uses model
• Excel based
  – Draws collections/spending patterns by day from systems
  – Utilizes dividend/repurchase forecasts by day
  – Evaluates capital spending and adjusts current year from previous
  – Evaluates year to year adjustments to business models
• Control in place so that those who use it do not develop it
• Look to be within 10% of the actual cash on any given day
ST Forecasting Model

Operating Cash Flows
- Prior Year Inflows
- Prior year Outflows

Business Model Changes

Investing & Financing Cash Flows
- Capital Spending
- Share Repurchase
- Dividend Forecast

Excel Model

Resulting Forecast
- CP Position
- Cash Repatriation
- Intercompany Loans
- 3rd Party Borrowings
Adaptable to other time periods

- However, going significantly beyond 45 days increases the volume of data and complexity to manage
Next Steps

- Continue to use the process for forecasting USD flows into Europe from subsidiaries
- Roll out the same process to Europe
  - Integrate multiple currency, increasing complexity of forecasting and positioning
US Longer Term Cash Forecasts

• Key objective of long term forecasting is to evaluate needs and generate detailed discussions with Senior Management on capital structure
  – Debt financing, commercial paper balances and cash repatriation actions

• Baxter longer term cash forecasting process utilizes a sources/uses model but less detailed than the short term process
  – Generate a rolling 4 quarter timeline, prepared quarterly
  – Based on historical patterns of cash flows
  – Excel based
  – Target 20% accuracy for quarterly US flows
Global Cash Forecast

• Global cash forecast provides a longer term outlook of strategic financing and investing requirements.

• Key objectives include:
  – Determining excess cash balances and repatriation planning
  – Implications of strategic plans on longer term lending and borrowing needs
  – Determining best long term use of cash
  – Developing strategies to invest cash most efficiently
Global Cash Forecast

• Less specific detail and generally only see ending bank account details
  – Intercompany and 3rd party cash flows are the focus
  – Specific inflows or outflows are not forecast

• Uses a system called TreasuryVision to capture global flows on a daily basis and excel to analyze the data
  – System has been in place for about 1 year and the forecasting process is now being finalized

• Target 30% accuracy
  – Expect this target to be lowered as more data is complied
Global Cash Forecast

- Baxter’s Treasury Vision model uses historical daily cash balances and an algorithm based on historical patterns to predict the cash in each country.
  - Incorporates a longer view P&L forecast to predict future cash balances by country.

Targeting 30% accuracy vs. actual.
LT Forecasting Model

Historical Cash Balances
- Input from Treasury Vision System

Baxter Long Range Plan
- P&L Driven Models

Excel Model

Resulting Forecast
- Position for Cash investing
- Cash Repatriation
- Longer term plan for company capital structure planning
Conclusion

• It is a long path, but the results have been valuable
  - Better use of commercial paper in the US
  - Less need to utilize 3\textsuperscript{rd} party lines of credit
  - Smaller unwanted currency impacts on the P&L
  - Resulting in lower costs and more control

There is still more work to do, but we see this as an on-going journey, not a final end point.
Q&A

• Jeff Schaible, Baxter
• Cindy Gerhard, Citi
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